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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,040	02/01/2001	Mathias Bischoff	GR 00 P 1078 US	8362

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EXAMINER

PHAN, HANH

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/775,040

Applicant(s)

BISCHOFF, MATHIAS

Examiner

Hanh Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 14 and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 14, the phrase “a **second circulator**” is unclear because in claim 1 “a **first circulator**” does not mentioned.

In claim 17, the phrase “the method according to claim 16, which comprises providing an access node according to claim 1 and generating the light signals in the access node” is unclear.

In claim 18, the phrase “the method according to claim 16, which comprises feeding the light signals into user devices according to claim 14” is unclear.

In claim 19, the phrase “the method according to claim 16, which comprises feeding the light signals into user devices according to claim 15” is unclear.

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In claim 20, the phrase, "providing an access node according to claim 1 and at least one user device according to claim 14, and carrying out the method according to claim 15 with the access node and the at least one user device" is unclear.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 5-9, 11 and 15-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagatsu et al (US Patent No. 6,626,590).

Regarding claim 1, referring to figures 3 and 9, Nagatsu discloses an access node (i.e., an access node 111, Fig. 3) for optical networks with variable access wavelengths, comprising:

a plurality of first optical conductors (i.e., optical fibers output from MxM' optical switch 118, Fig. 3) each disposed to connect a respective user device (i.e., electrical signal inputs 119, Fig. 3);

at least one second optical conductor (i.e., optical fibers 104, 106, 108, 110, Fig. 3) for connecting the access node to an optical network; and

a plurality of light sources (i.e., M-channel shared spectral source 117, Fig. 3) emitting light signals at wavelengths of the optical network and connected to the first optical conductors such that the light signals of the light sources can be modulated (i.e., optical modulators 120, Fig. 3) in the user devices (col. 10, lines 47-67, col. 11, lines 1-67 and col. 12, lines 1-57).

Regarding claim 2, Nagatsu further teaches at least one second optical conductor is one of a plurality of optical conductors connecting the access node to the optical network (Fig. 3).

Regarding claim 5, Nagatsu further teaches optical coupling elements (i.e., optical couplers 500, Fig. 7) disposed between the light sources and the first optical conductors.

Regarding claim 6, Nagatsu further teaches the optical coupling elements (i.e., optical couplers 500, Fig. 7) are selected from the group consisting of first circulators and directional couplers.

Regarding claim 7, Nagatsu further teaches a first switching matrix (i.e., optical switch $M \times M'$ 118, Figs. 3 and 7) connected between the light sources and the first optical conductors.

Regarding claim 8, Nagatsu further teaches first switching matrix (i.e., optical switch $M \times M'$ 118, Figs. 3 and 7) capable of multicasting.

Regarding claim 9, Nagatsu further teaches a signal processing block (i.e., optical add/drop circuits 101 and 102, Fig. 3) with optical wavelength division

multiplexers (114, 116) connected between the first optical conductors and the second optical conductors.

Regarding claim 11, Nagatsu further teaches the signal processing block includes at least one additional signal processing unit (Fig. 3).

Regarding claim 15, Nagatsu further teaches a user device configured for connecting to the access node, the user device comprising a modulator (120)(Fig. 3) operating in reflection mode and configured to be connected to an information source.

Regarding claim 16, referring to Figures 3 and 7, Nagatsu discloses a method of feeding a plurality of signals from a plurality of users into an optical network, which comprises the following steps:

generating a number light signals of different wavelength in an access node (i.e., M-channel shared spectral source 117, Fig. 3);

extracting the light signals from the access node and transmitting the light signals to a number user devices (Fig. 3);

modulating (i.e., optical modulators 120, Fig. 3) the light signals with user signals in the user devices to form modulated light signals;

injecting the modulated light signals into the access node (Fig. 3);

generating wavelength division multiplex signals in the access node (Fig. 3); and

feeding the wavelength division multiplex signals into the optical network (Fig. 3, col. 10, lines 47-67, col. 11, lines 1-67 and col. 12, lines 1-57).

Regarding claim 17, Nagatsu further teaches generating the light signals in the access node (Fig. 3).

Regarding claims 18-20, Nagatsu further teaches feeding the light signals into user devices (Fig. 3).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 4, 10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagatsu et al (US Patent No. 6,626,590) in view of Okazaki et al (US Patent 6,285,479).

Regarding claims 3 and 4, Nagatsu teaches all the aspects of the claimed invention as set forth in the rejection to claim 1 above except fails to teach the light sources are laser arrays. However, Okazaki teaches the light sources are laser arrays (Fig. 3, col. 10, lines 22-56). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the light sources are laser arrays as taught by Okazaki in the system of Nagatsu. One of ordinary skill in the art would have been motivated to do this Okazaki suggests in column 10, lines 22-56 that using such light sources are laser arrays have advantage of allowing providing the optical wavelengths different from each other.

Regarding claim 10, the combination of Nagatsu and Okazaki teaches a second switching matrix (i.e., a second matrix switch 30a'-1...30a'-2, Figs. 15-17 of Okazaki) disposed between the first optical conductors and the signal processing block.

Regarding claim 12, the combination of Nagatsu and Okazaki teaches
The at least one additional signal processing unit is selected from the group consisting of a switching matrix, an optical switch, an optical amplifier, and an optical monitoring device (Figs. 1-17 of Okazaki).

Regarding claim 13, the combination of Nagatsu and Okazaki teaches a further switching matrix combined with said second switching matrix (Figs. 1-17 of Okazaki).

8. Claims 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagatsu et al (US Patent No. 6,626,590) in view of Pan et al (US Patent 6,275,511).

Regarding claim 14, Nagatsu teaches all the aspects of the claimed invention as set forth in the rejection to claim 1 above except fails to teach a user device comprising an optical circulator and a modulator to be connected to an information source. However, Pan teaches a user device comprising an optical circulator and a modulator to be connected to an information source (Figs. 7A and 7B, col. 6, lines 40-67 and col. 7, lines 1-24). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the user device comprising an optical circulator and a modulator to be connected to an information source as taught by Pan in the system of Nagatsu. One of ordinary skill in the art would have been motivated to do this Pan suggests in column 6, lines 40-67 and col. 7, lines 1-24 that using such a user

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device comprising an optical circulator and a modulator to be connected to an information source has advantage of allowing providing the optical information signals from the users into an optical network.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (703)306-5840.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (703)305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.



Hanh Phan

12/10/2003